OIPE IAP65
NOV 14 2005
PATENT & TRADEMARK OFFICE

Replacement Sheet

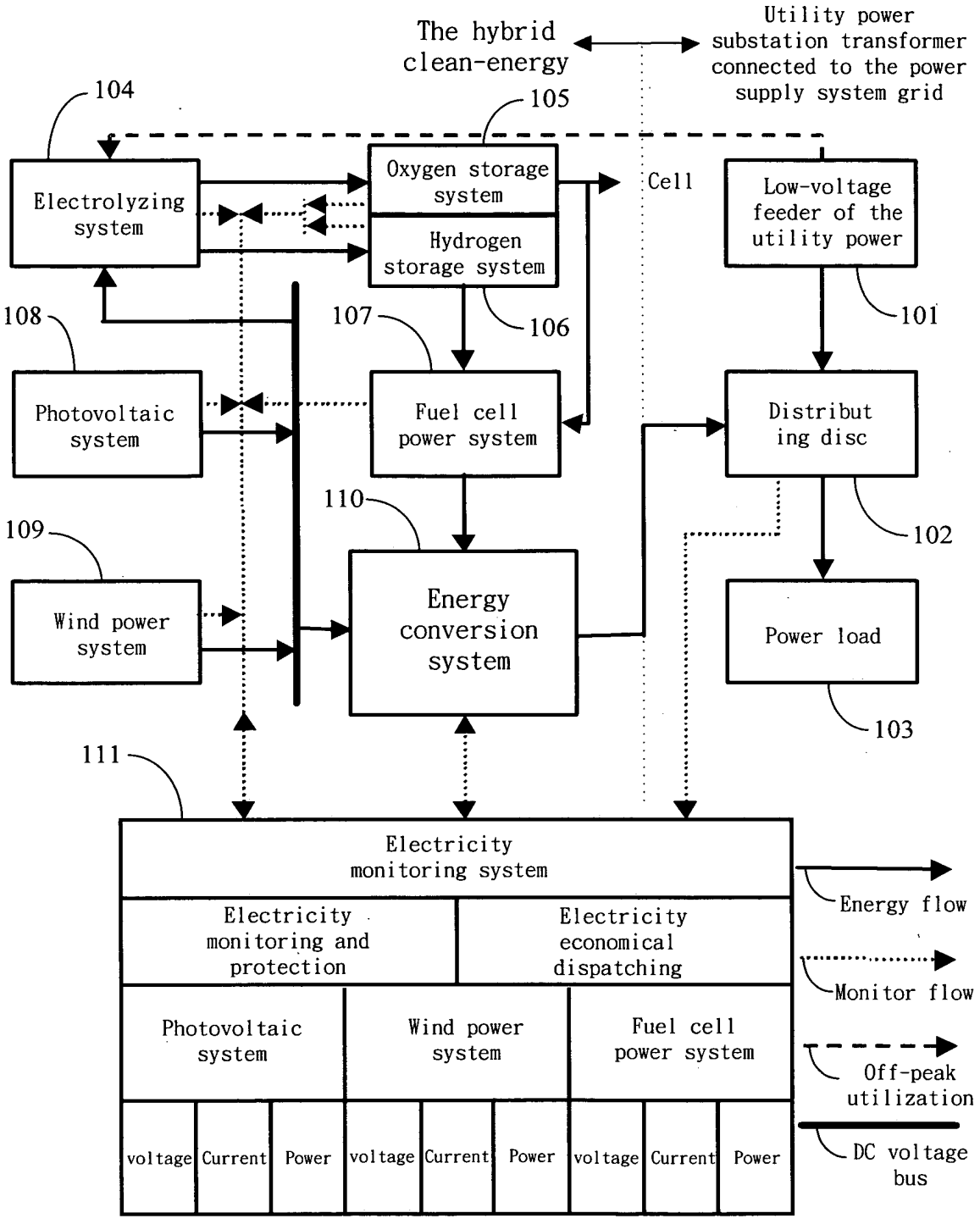

Fig.1

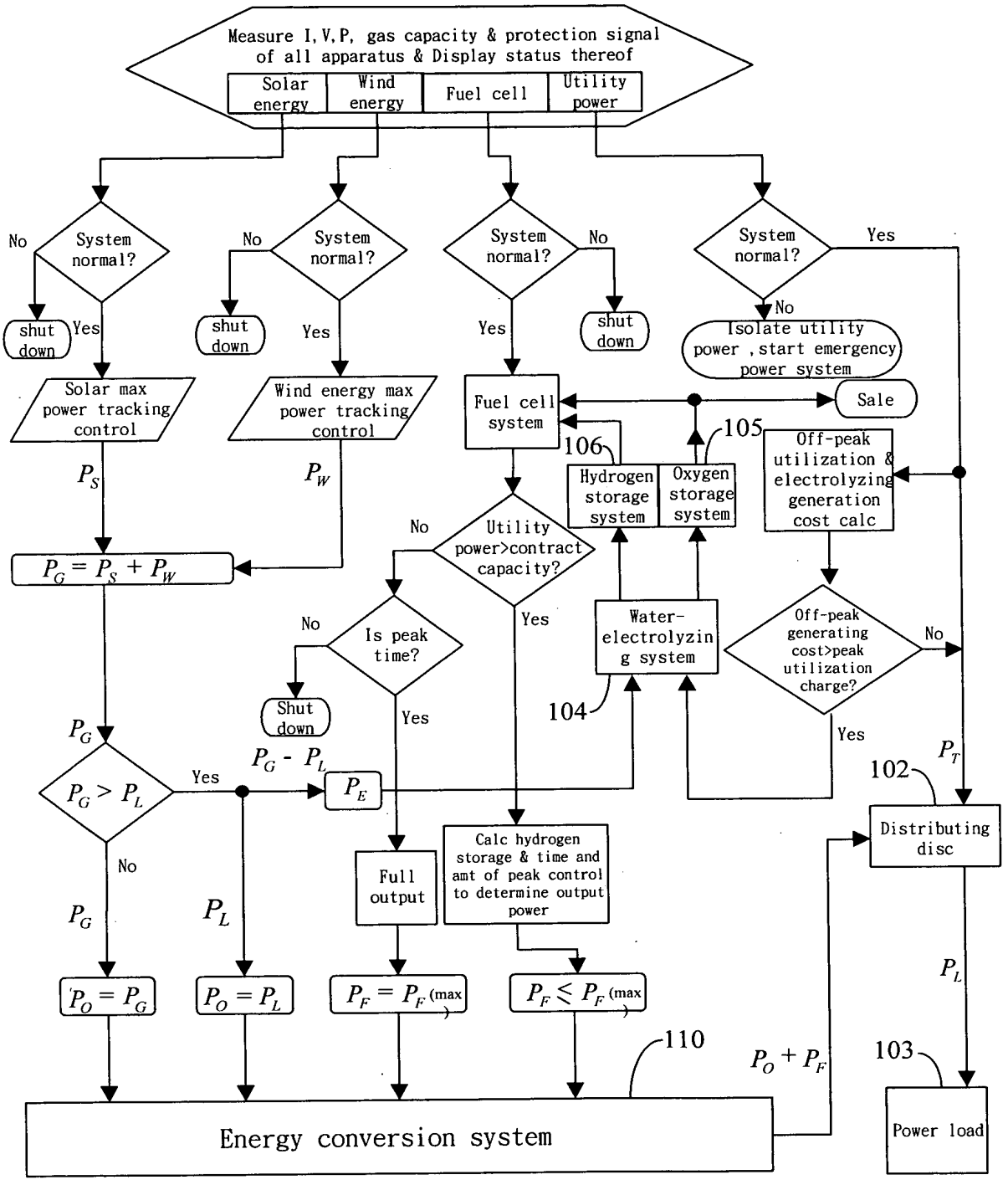
Measure I, V, P, gas capacity & protection signal of all apparatus & Display status thereof
Solar energy
Wind energy
Fuel cell
Utility power
System normal?
No
Yes
shut down
Solar max power tracking control
Wind energy max power tracking control
Fuel cell system
Isolate utility power , start emergency power system
Sale
Hydrogen storage system
Oxygen storage system
Off-peak utilization & electrolyzing generation cost calc
Utility power>contract capacity?
Is peak time?
Water-electrolyzing system
Off-peak generating cost>peak utilization charge?
P_S
P_W
$P_G = P_S + P_W$
P_G
$P_G > P_L$
$P_G - P_L$
P_E
P_L
$P_O = P_G$
$P_O = P_L$
$P_F = P_{F(max)}$
$P_F \leq P_{F(max)}$
P_T
$P_O + P_F$
Full output
Calc hydrogen storage & time and amt of peak control to determine output power
Distributing disc
Power load
Energy conversion system
102
103
104
105
106
110

Fig.2

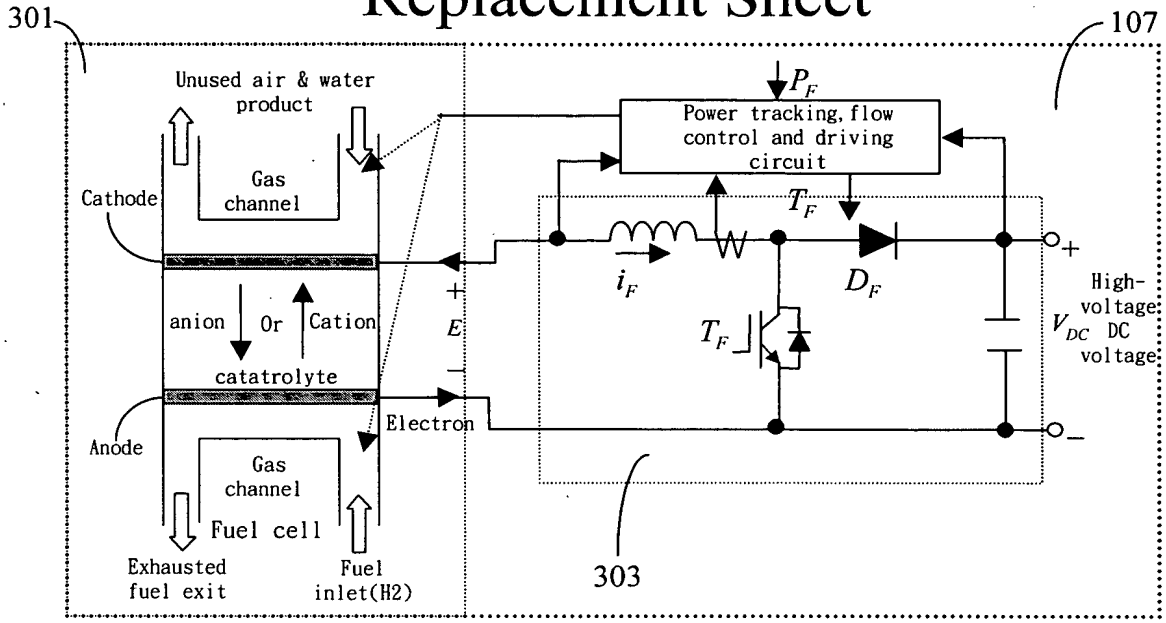

Fig.3(a)

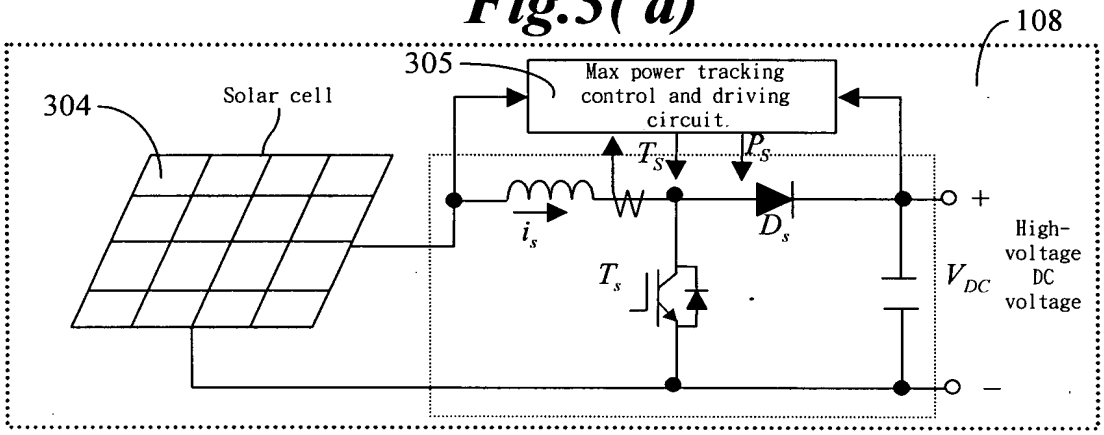

Fig.3(b)

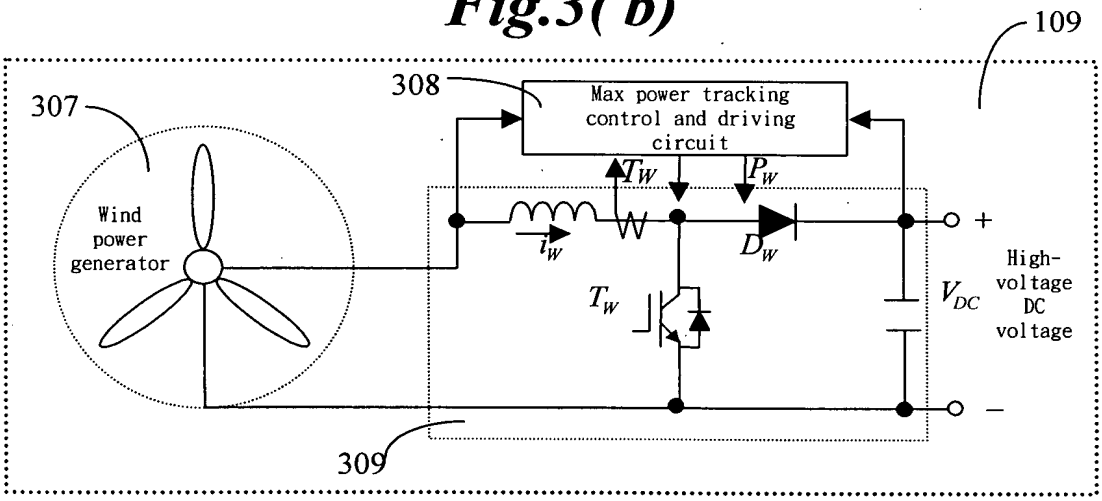

Fig.3(c)

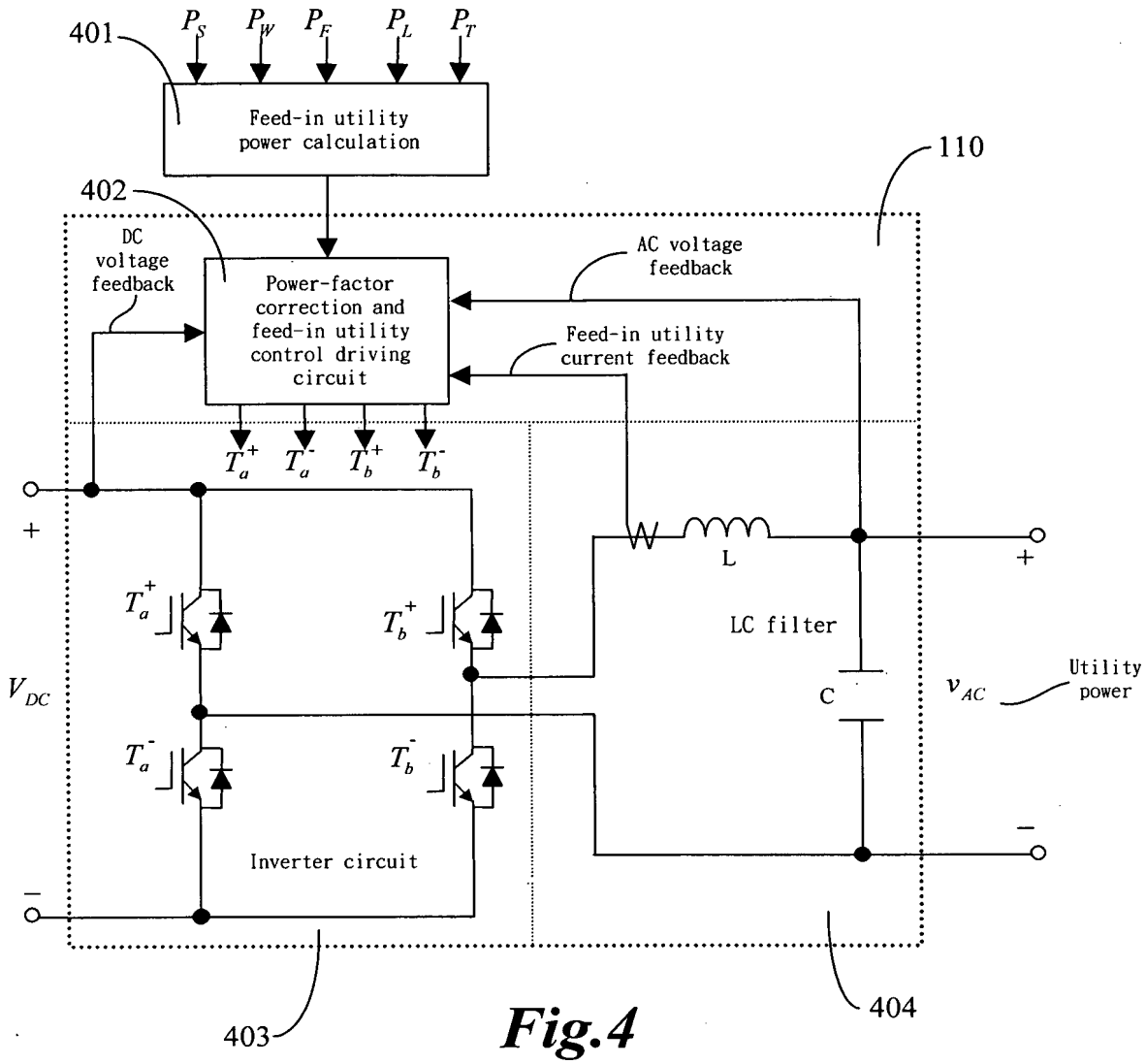
401
P_S P_W P_F P_L P_T
Feed-in utility power calculation
110
402
DC voltage feedback
Power-factor correction and feed-in utility control driving circuit
AC voltage feedback
Feed-in utility current feedback
T_a^+ T_a^- T_b^+ T_b^-
+
L
+
T_a^+
T_b^+
LC filter
V_{DC}
C
v_{AC}
Utility power
T_a^-
T_b^-
Inverter circuit
−
−
403
404

Fig.4

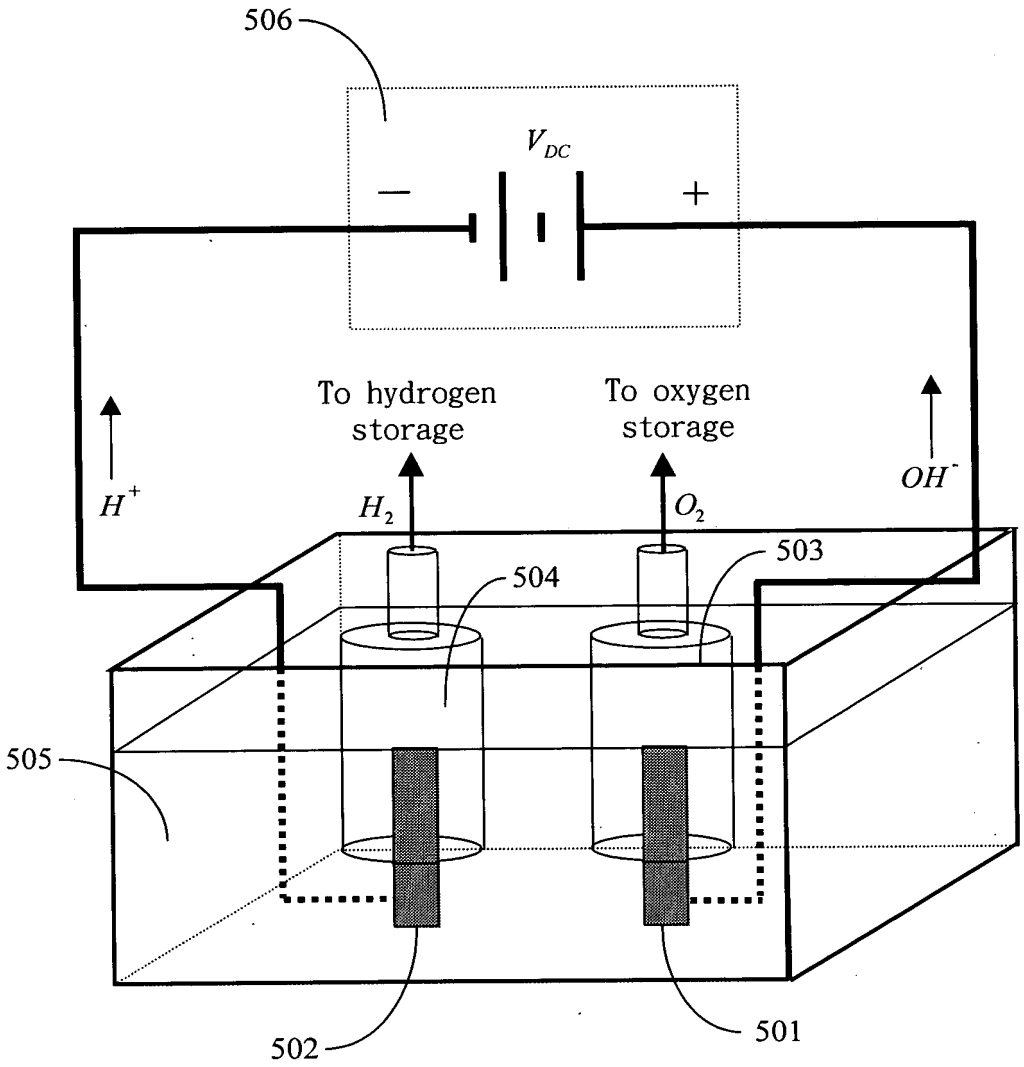
506
V_{DC}
−
+
To hydrogen storage
To oxygen storage
H^+
H_2
O_2
OH^-
504
503
505
502
501

Fig.5

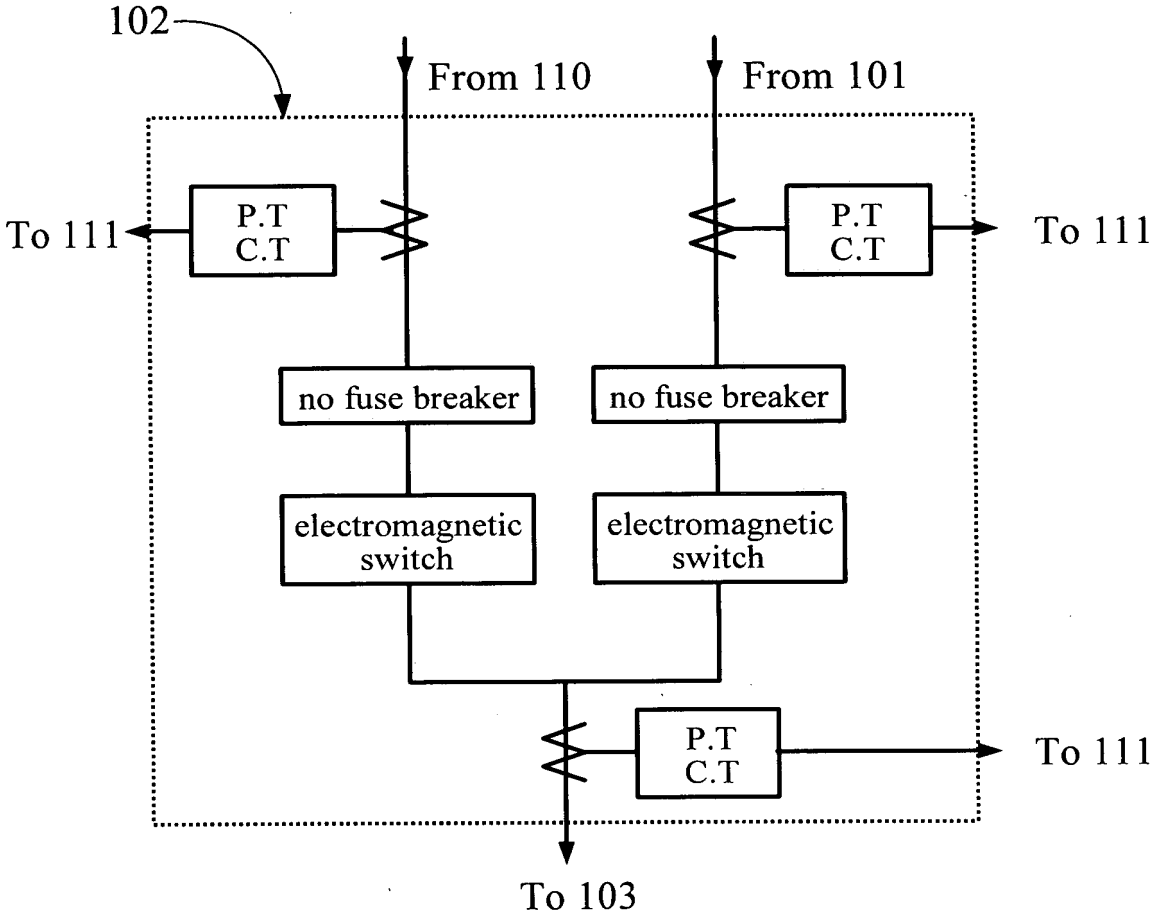
102
From 110
From 101
To 111
P.T
C.T
P.T
C.T
To 111
no fuse breaker
no fuse breaker
electromagnetic switch
electromagnetic switch
P.T
C.T
To 111
To 103

Fig.6